SurvivalRing

Study Yesterday . . Prepare Today . . Live Tomorrow

This digital document created and presented by Richard Fleetwood. He is the founder, author, producer, and webmaster of the **SurvivalRing** *(http://www.survivalring.org)* and **Civil Defense Now!** *(http://www.survivalring.org/cd-main.htm)* websites.

SurvivalRing has as its goal the ideal of being the leading source of survival, preparedness, and self reliance information on the Internet. Linkage, assistance, and creation of digital content in areas that until now have only been hinted at or impossible to find, is being added to everyday via the Survival-Ring website and email lists.

Thousands of hours of searching, writing, and communications have been spent collecting over 2 gigabytes of digital content, as well as tens of thousands of pages of hard copy original public domain material in the areas of civil defense, survival, training, and preparedness, from all over the globe. As much as possible is being put online at his website at

http://www.survivalring.org

Civil Defense Now!

Part of The SurvivalRing website

The content of THIS file, while created from PUBLIC DOMAIN material, produced by the U.S. (or other) Government at taxpayer expense, is presented in THIS digital format, produced from the ORIGINAL hardcopy document, for the benefit of all mankind, in hoping to help spread the idea of PREPAREDNESS for any and all threats that may come from either natural, extraterrestrial (space based), or manmade sources.

There are too many situations and incidents that can come to pass in everyday life, that when time is taken to learn and skills obtained, can mean the difference between life and death. Sept. 11, 2001 proved to the world that no matter how safe a person thinks they may be, death and injury can come from the most UN-LIKELY place, at any time. The documents presented in this series of digitized works, can help the average person with the knowledge within, to know how to save those persons closest to them in REAL disaster. Help spread this idea of sharing SURVIVAL INFORMATION.

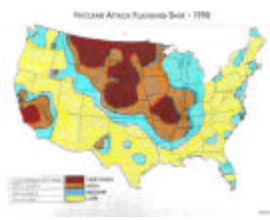
If you have documents from any era, on any disaster or civil defense area, PLEASE contact Richard at his email address of **RAFLEET@AOL.COM**. Check the website for the LATEST additions to the CIVIL DEFENSE NOW online library archive. All data online, and much more, is also available on CD-ROM. Information is available at the website on how to obtain it. Thanks for your support, and enjoy the information contained on the following pages. Share them with those who will learn from them and teach what they know to others.

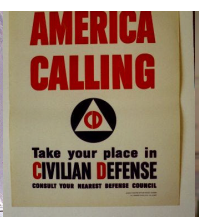
Donations of U.S. or other civil defense documents, articles, books, videos, digitized ephemera, patches, tools, photos, or anything of this nature is appreciated, as well as cash gifts or donations to support the website costs and bills. Address information is available on the homepage of Civil Defense Now! (URL located above)

- Richard Fleetwood – January 2002 — ALL RIGHTS RESERVED –

This document may NOT be reproduced commercially on any media WITHOUT EXPRESSLY WRITTEN permission from the creator of this digital presentation. Educational Institutions MAY use this material in any way needed.

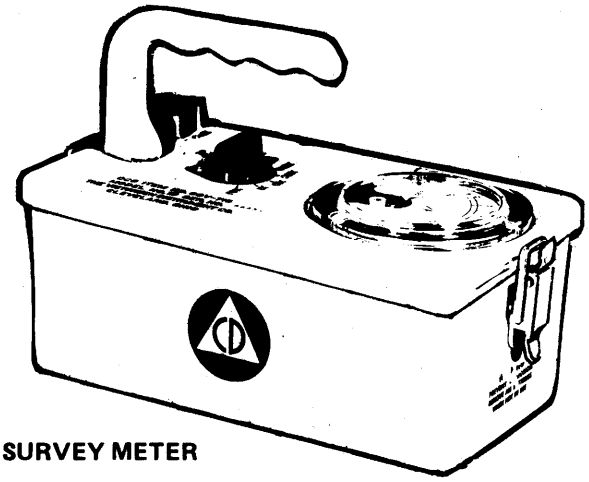
Permission granted to individuals for PERSONAL USE ONLY.



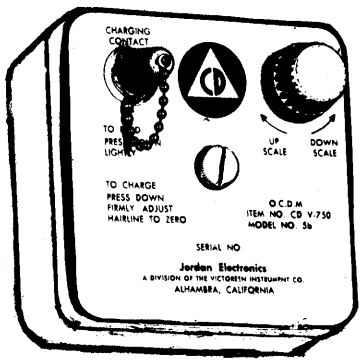


HOW TO USE YOUR RADIOLOGICAL INSTRUMENTS (SURVEY METER AND DOSIMETER) TO FIND THE BEST SHELTER AND TO MINIMIZE YOUR EXPOSURE TO RADIATION

READ ALL OF THE FOLLOWING INSTRUCTIONS **BEFORE** YOU ATTEMPT TO OPERATE THE INSTRUMENTS



SURVEY METER



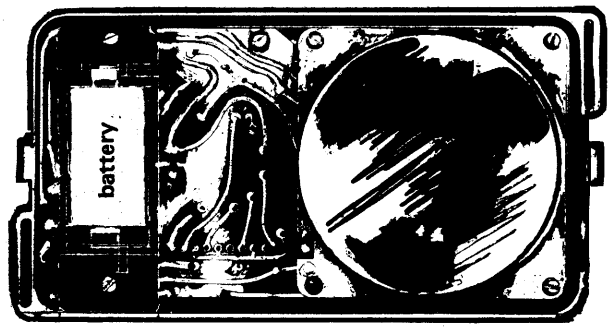
DOSIMETER CHARGER

DOSIMETER

RADIOLOGICAL SURVEY METER

Your survey meter indicates the rate at which your body is being exposed to radiation. It is used to help you find the best shelter from radiation and to assist you to evaluate shielding improvements you may make in your shelter. The survey meter tells you the rate, in Roentgens per hour, at which you are being exposed to radiation from fallout just as the speedometer of an automobile tells you the rate of speed, in miles per hour, you are traveling. This survey meter will measure radiation from zero to 500 Roentgens per hour (R/hr).

figure 1



OPERATION OF SURVEY METER

1. Open case by unfastening two case clips, and remove case bottom.

2. Insert standard "D" cell (Figure 1) by placing + end of the battery against clip marked +.

3. Close case. Rotate selector switch to zero position (Figure 2). Allow instrument to warm up for about 2 minutes.

4. Rotate zero knob until pointer is on zero of meter scale (Figure 2).

5. Rotate selector switch counter clockwise to circuit check position and hold. Meter should give an up-scale reading in or near red area marked "Circuit Check." If not, replace battery and repeat above steps until a better battery is found. Then you will be ready to measure the radiation rate. If after trying several batteries and performing steps 3 through 5 the meter fails to give an up-scale reading in or near the red area marked "Circuit Check", the instrument is faulty and should NOT be used.

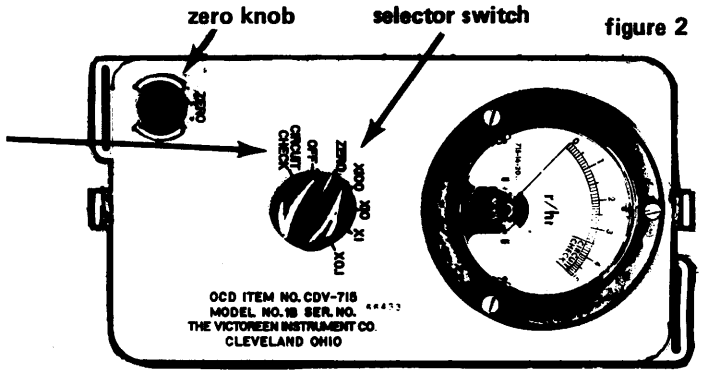


figure 2

6. Rotate selector switch clockwise to X100, X10, X1, or X0.1 switch position. Use switch position that produces highest on-scale meter reading.

7. Multiply meter reading by final switch setting to obtain exposure rate. EXAMPLE: Reading in Figure 3 is 2.5 (meter reading) times switch setting (which is times 100) for an exposure rate of 250 Roentgens per hour (R/hr).

8. Survey (move instrument about) shelter to locate area giving lowest reading. This is the preferred area.

9. Improve this part of the shelter by placing furniture, books and other materials between area of lowest reading and areas of higher readings.

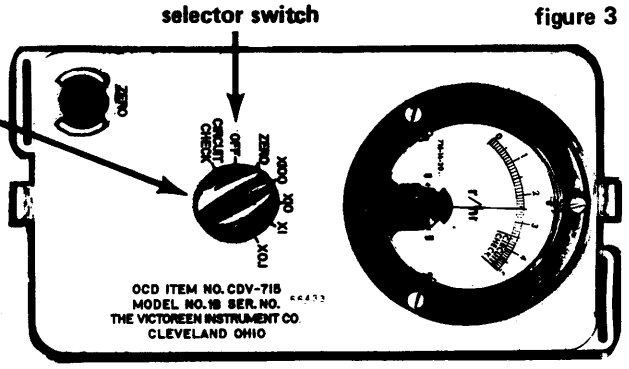
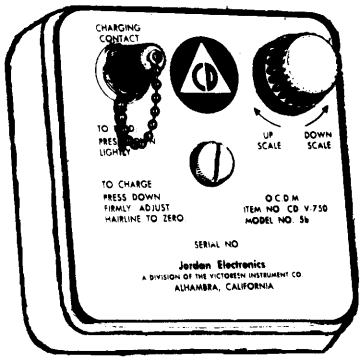


figure 3

DOSIMETER

A dosimeter is used to measure your body's accumulated exposure to radiation. It measures the total amount of radiation your body is exposed to in a manner similar to the way an odometer in an automobile measures the total miles traveled. It is used together with the survey meter to determine and verify the value of your shelter. A pocket clip is provided so that it may be fastened to a person's garments.

DOSIMETER CHARGER



A Dosimeter Charger is used to charge or "ZERO" the Dosimeter.

OPERATION OF DOSIMETER AND CHARGER

1. Point the dosimeter at a source of light (figure 4) —even a match, a candle or a flashlight will do— and observe the position of the hairline indicator. If the line is visible and positioned less than mid-scale, record reading. If the line is at or above mid-scale or not visible, the dosimeter must be rezeroed. To rezero, a dosimeter charger is required.

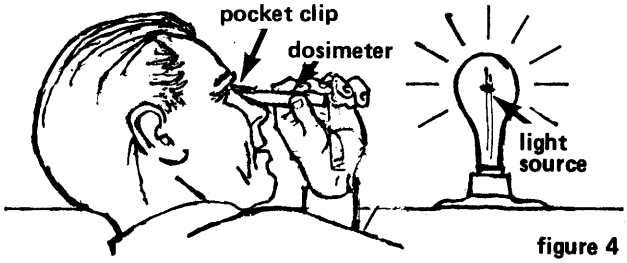


figure 4

2. To operate the Dosimeter Charger, loosen thumbscrew in the top or bottom center of the charger with a coin such as a dime and remove bottom case. Install battery (in correct way, +and–) and reassemble.

3. Position the charger on a flat surface such as a table. Unscrew the cap on the charging contact and place end of the dosimeter opposite pocket clip and eye piece on charging contact of charger. (See fig. 5)

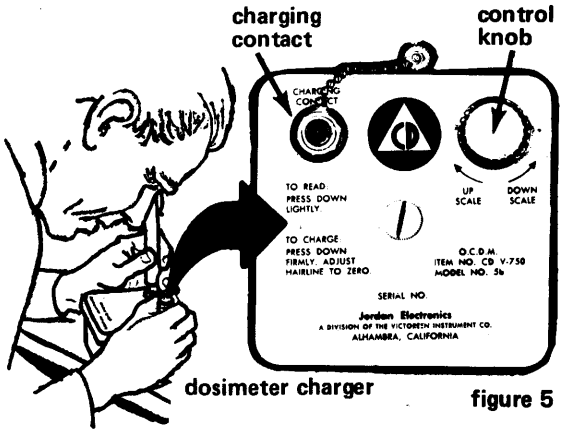


figure 5

4. Apply downward pressure and you should see a meter scale and a line while looking through the dosimeter. If no line is visible, rotate the control knob, located in the upper right hand corner (figure 5), until a line appears.

5. Set line to or near zero (figure 6) by turning control knob (figure 5).

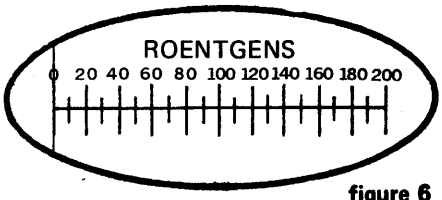


figure 6

6. To read dosimeter at any time -- point at source of light and observe setting by looking through dosimeter (figure 4). Reading of figure 7 is 75 Roentgens. Your accumulated exposure in Roentgens is this number less the initial reading you recorded.

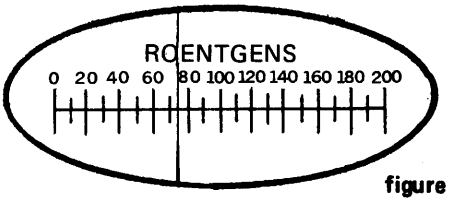


figure 7

PROTECTIVE MEASURES

During fallout deposition, all windows, doors, and nonvital vents in sheltered locations should be closed to prevent fallout particles from entering the shelter.

When radiation levels become measurable inside the shelter, make a survey of all shelter areas to determine the best protected locations. Repeat this procedure periodically. This information should be used to limit the exposure of shelter occupants by locating occupants in areas with lowest levels of radiation. Experience and research have shown that if exposure is kept below a certain level, medical care will not be required for the majority of people.

SYMPTOMS OF RADIATION INJURY

Radiation causes injury to body tissue. If exposure is kept below lethal limits, the body is able to repair most of this injury over a period of time. Observable symptoms of radiation sickness are: nausea, vomiting, diarrhea, fever, listlessness, and a general feeling of fatigue. Some or all of these symptoms may appear within the first three days. They may then disappear, reappearing after a week or so, sometimes accompanied by bloody diarrhea and swelling of the nasal passages, mouth and throat. Generally speaking, the greater the exposure, the earlier the symptoms will appear and they will be more severe and last longer. Radiation sickness is not contagious; a person cannot "catch" radiation sickness from another person.

The severity of effects on individuals exposed to the same amount of radiation will vary widely. However, the following are estimated short-term effects on humans of external gamma exposures of less than one week.

Total Exposure	Visible Effect
0-50R	No visible effects.
50-200R	Brief periods of nausea on day of exposure. 50% may experience radiation sickness (nausea and vomit), 5% may require medical attention, no deaths are expected.
200-450R	Most members of the group will require medical attention because of serious radiation sickness. 50% deaths within two to four weeks.
450-600R	Serious radiation sickness in all members of the group, medical attention required. Death to more than 50% within one to three weeks.
Over 600R	Severe radiation sickness. 100% deaths in two weeks.

CARE OF RADIATION CASUALTIES

If a person becomes ill from exposure to radiation, he should be placed under the care of a physician or medical technician, if possible. In the postattack situation, medical care may be very limited. Care consists primarily of keeping the patient comfortable and inactive. Keep the patient clean and isolated from infectious diseases. The ill person should have liquids to replace the body fluids lost as a result of vomiting and diarrhea as soon as he can tolerate them. Nourishing foods should be given the patient since they are needed for recovery.

IN AN EMERGENCY, THE ABOVE GUIDANCE IS ADEQUATE FOR DETERMINING THE BEST AVAILABLE SHELTER AREA AND EXPECTED VISIBLE EFFECTS OF RADIATION INJURY. AFTER THE INITIAL READINGS ARE TAKEN THE "HANDBOOK FOR RADIOLOGICAL MONITORS" SHOULD BE USED TO OBTAIN ADDITIONAL INFORMATION. A COPY OF THIS HANDBOOK IS LOCATED WITH THE INSTRUMENTS.